

IN THE CLAIMS

Please amend claims as follows:

1-8 (Canceled).

9. (Currently Amended) A method of forming a trench isolation layer of a semiconductor device, comprising the steps of:

forming a trench-etching pattern for defining an active area on a substrate;

forming an isolation trench on the substrate using the [trench etching] trench-etching pattern as an etching mask;

forming a silicon nitride liner on [an] inner [wall] walls of the trench;

forming a silicon oxide liner on [an] inner [side] sides of the silicon nitride liner;

performing heat treatment for hardening and densifying the silicon oxide liner;

filling the trench having the silicon oxide liner [with] by depositing a first buried layer of silicon oxide;

partially recessing an upper surface of the first buried layer by etching; and

filling a remaining portion of the trench by depositing [the] a second buried layer of silicon oxide on the first buried layer whose upper surface [is] has been partially recessed by the etching.

10. (Currently Amended) The method of claim 9, further comprising a step of forming a thermal oxide layer on the inner [wall] walls of the trench[, between the step of forming the trench and] before the step of forming the silicon nitride [layer] liner.

11. (Original) The method of claim 9, wherein the silicon oxide liner includes an HTO oxide layer, and the heat treatment is performed over about 1100°C for about 30 minutes to about 90 minutes.

12. (Currently Amended) The method of claim 9, wherein the step of filling the trench with the first buried layer includes an SOG layer, and further comprising a curing step for changing the SOG layer into a silicon oxide layer [is further comprised,] before the step of etching the first buried layer.

13. (Currently Amended) The method of [forming the trench isolation layer of] claim 12, wherein the SOG layer includes a polysilazane series material, and the curing step is performed at a temperature of about 700°C to about 800° C for about 10 minutes to about 60 minutes.

14. (Currently Amended) The method of [forming the trench isolation layer of] claim 9, wherein the step of depositing the second buried layer includes performing HDP-CVD.

15. (Currently Amended) The method of [forming the trench type isolation layer of] claim 9, further comprising the steps of:
exposing an upper part of the trench etching pattern[,] by removing a portion of the second buried layer with a planarization etching; and

selectively removing the trench etching pattern.

16. (Currently Amended) The method of [forming the trench type isolation layer of] claim 9, wherein the step of etching the first buried layer is processed by wet etching.